AF

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Chip et al.
For	:	**MODIFIED COPOLYMER LATEX BINDER**
Serial No.	:	09/993,745
Filed	:	November 14, 2001
Group Art Unit	:	1771
Examiner	:	Boyd, Jennifer A.
Last Office Action	:	July 13, 2005
Attorney Docket No.	:	GT-5400 OMNS 200051

REPLY BRIEF UNDER 37 C.F.R. § 41.41

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Reply Brief is in furtherance of the Examiner's Answer dated June 15, 2006, and the Appeal Brief mailed to the U.S. Patent and Trademark Office on December 14, 2005.

Appellant files herewith a Reply Brief in connection with the above-identified application wherein claims1-10 were finally rejected in the Final Office Action of July 13, 2005.

CERTIFICATE OF FIRST CLASS MAILING

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Cathryn Terchek

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Date: July 19 2006

ARGUMENTS

The Examiner has rejected claims 1-10 under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the enablement requirement. The Examiner also rejected claims 1-10 under 35 § U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 4,539,254 to O'Connor ("O'Connor"). Appellants respectfully traverse the rejection as follows.

A. The Enablement Rejection

In the Examiner's Answer, the Examiner essentially repeats her arguments from the final office action as to why she believes that the claims do not satisfy the enablement requirement. That is, the Examiner states that although short stop resins are known in the art, information regarding the nature of the specific UF resin used in the application cannot be found and is not listed in the specification. The Examiner believes that the failure to provide information regarding the identity of the short stop agent used in the UF resin, the time at which the short stop agent is added, and the physical differences between a short stopped UF resin and a normal UF resin fails to meet the requirements of §112.

This rejection as well as the Examiner's arguments was addressed at great length in the Appeal Brief. However, Appellants would like to emphasize certain points to make it clear why the Examiner is incorrect in making this rejection.

The Examiner notes that the Applicants have presented one Example in the specification. However, the Examiner states that the Example does not discuss the preparation of the short stopped UF resin. Absent the presentation of any details regarding this short stopped resin, the Examiner believes that it would be unclear to one of ordinary skill in the art how to make the short stopped UF resin and would require undue experimentation.

Appellants respectfully disagree. Short stopped (or chain-stopped) UF resins are known in the art and commercially available. A simple internet search reveals this. It would not require "undue experimentation" to make such resins as they are known and available. The Examiner is correct in her assertion that different short stopped resins from different manufacturers may have different properties (e..g different chain lengths, etc.).

However, Appellants submit that no specific values were provided for the above mentioned parameters as they may vary depending on the characteristics desired in the final latex binder of the invention. That is, by varying the identity and amount of short stop agent added as well as the predetermined time at which it was added to the UF resin polymerization reaction, different UF resins may be manufactured having various properties suitable for use in the latex binder of the present invention.

Appellants submit that various manufacturer's of such short stopped UF resins may alter their polymerization processes to make various suitable UF resins. One skilled in the art could determine appropriate UF polymerization conditions including the appropriate amount of short stop agent and timing to produce desired properties in the UF resin according to the present claims. Alternately, one skilled in the art could choose an appropriate commercially available short stopped UF resin for use in the present invention to produce a copolymer latex binder having the desired properties. As is well known, a disclosure is sufficient even if it would require that one skilled the art conduct some experimentation. *In re Vaeck*, 20 USPQ2d 1510 (Fed. Cir. 1993).

As is well understood, claims must be read in light of the specification and also must be understood as one skilled in the art would understand them. Here, the Appellants have provided a description of properties desired in the latex binder, specifically improvements in hot dry elongation (page 1, lines 17-24 and table 2), high temperature resistance (table 2) as well as stability (see table 1). One skilled in the art would be able to choose a commercially available short-stopped UF resin or produce one themselves through the teachings of the prior art to produce a latex binder of the present invention having desired properties without the need for undue experimentation. Thus, Appellants submit that the claims meet the requirements of §112, first paragraph.

B. The Pending Claim are not Obvious Over O'Connor

The Examiner's main argument here appears to be that because the present claims do not recite the amount of short-stop agent used in the manufacture of the UF resin, that O'Connor, which does not disclose ANY short stop agent in the

UF resin, would render the claims obvious. Her reasoning is that since even a minor amount of short-stop agent, which would result in minimal impact on the polymer, would satisfy the claims, the presently claimed binder would be essentially the same product with the same properties as that of O'Connor.

Appellants disagree for several reasons. First, it is well known that one must read ranges in light of what one skilled in the art would recognize as workable. That is, as is well understood, claims must be read in light of the specification. *Comark Communications, Inc. v. Harris Corp.*, 48 USPQ2d 1001 (Fed. Cir. 1998). Thus, open ended claims are limited by what a person skilled in the art would understand to be workable. *Ralston Purina Co. v. Far MarCo. Inc.*, 227 USPQ 177 (Fed. Cir. 1985). Here, one skilled in the art would recognize that a lower limit to the amount of short stop agent used in the UF resin of the present invention is the amount that would improve the properties over a binder using a non short-stopped UF resin. The Examples of the present invention make it clear that it is the use of a short stopped UF resin having properties **different** from a normal UF resin that give the latex binder the improved physical characteristics, as this is the advantage of the present invention as discussed throughout the present application. Thus, whatever the lower limit to the amount of short stop agent that would effect such changes in the characteristics of the UF resin, it is clearly greater than some "minor" amount that would result in "minimal impact on the structural and physical characteristics of the polymer" as the Examiner states.

As noted in the Appeal Brief, one skilled in the art would understand the claims to read on UF resins having an appropriate amount of short stop agent added to effect the desired improvements in the polyester mats. That is, even though no specific amounts of short-stop agent are recited, one skilled in the art would clearly understand the claims to read on those amounts of short-stop agent that would be workable and produce the desired results. The Examiner's position that minute amounts of short-stop agent no producing any change in the UF resin or effecting any change in a mat utilizing a binder made from such a resin would still read on the claims is not supported. The claims are not read in a vacuum, but as one skilled in the art would understand them, including what would be workable based on the advantages disclosed in the specification.

Second, the Examiner's interpretation would essentially eviscerate a limitation on the claims, i.e. that the UF resin is short-stopped. As discussed above, one skilled in the art would read claim 1 to recite a short-stopped UF resin having properties *different* from conventional non-short stopped UF resins. That is, the amount of short-stop agent added must be sufficient to produce the desired properties in the resulting binder, as discussed in the specification. By reciting a short-stopped UF resin, Appellants are clearly distinguishing it over non-short stopped UF resins. Otherwise, the recitation of the use of a short-stop agent would be unnecessary and its inclusion would provide no meaning. Appellants have shown in Example 1 of the specification that the short stopped UF resin produces products having improved properties. Thus, such a UF resin is clearly different both in structure and properties from conventional UF resins as in O'Connor. One skilled in the art would understand the amount of short-stop agent must be in the range of what is known to be workable and produce the desired results in the final product.

The Examiner continues to assert that the burden has shifted to the Appellants to come forward with evidence establishing an unobvious difference between the claimed product and the prior art. Appellants have done exactly that in the Examples!

That is, the Examples clearly show the improved properties of a latex binder made using a short-stopped UF resin versus one using a normal UF resin. What more "evidence" does the Examiner wish the Appellants to produce?

Appellants submit that the Examiner has NOT met her burden of proving prima facie obviousness and that the burden has NOT shifted to the Appellants to prove distinctiveness of the short-stopped UF resin. Appellants further submit that it requires some scientific support to shift this burden and that the Examiner's unsupported allegations of sameness are insufficient.

Because O'Connor does not disclose or suggest the use of a short-stopped UF resin, it fails to anticipate or render the present claims obvious. Withdrawal of this rejection is requested.

CONCLUSION

In view of the above, Appellant respectfully submits that claims 1-10

are in condition for allowance.

Accordingly, it is respectfully requested that the Examiner's rejections be reversed.

Respectfully submitted,

FAY, SHARPE, FAGAN
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Dated: July 18, 2006

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